Kentucky's Public Riverports and Waterways

Vital to Kentucky's Economy

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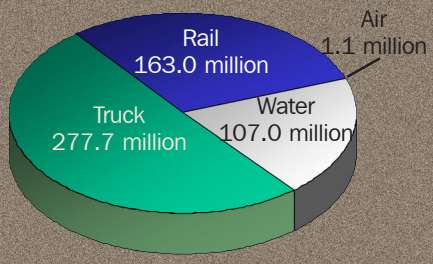
Vital Yesterday, Vital Today, and Vital to Our Future

Kentucky's Waterborne Transport

Rivers are an invaluable component of Kentucky's transportation and economic system. Since the 18th century, they have played a significant role in the state's history. They still play a major role in economic development today and will do so into the future. Waterway shipments through Kentucky's public and private riverports provide:

- Reliable, safe transport of commodities that travel long distances at an extremely low cost.
- An important location incentive to attract firms that ship or receive large volumes of freight by water.
- An alternative to highways and rail transport, thus, reducing highway and rail construction needs and providing the potential for considerable infrastructure savings.

Freight Movements in Kentucky – In 2002, 548.8 million tons of freight either originated or terminated in Kentucky. Of this, 107.0 million tons (19.5%) moved by water through Kentucky ports.



Kentucky Freight Movement (annual tons)

Kentucky Waterways – Kentucky's navigable waterways include eight rivers that span 1,070 miles, the longest stretch represented by the 664 miles along the Ohio River. These 1,070 miles of commercially navigable waterways are the most of any state in the lower 48 states. Currently, loading and/or off-loading facilities are provided at:

- Over 160 private terminals, most of them specialized and dedicated for private use, and
- Seven public riverports, which are open to all shippers for general cargo services.

In addition, four new public riverport authorities have been formed but are not fully operational.

Nearly 20% of Kentucky's freight moves by water.

Kentucky's Waterways

River	Ohio	Tennessee	Cumberland	Kentucky	Mississippi	Big Sandy	Green	Licking	Total
Navigable Miles	664	62	75	82	49	22	109	7	1,070

Well-equipped intermodal facilities connect transport modes, reduce transport costs, and promote economic development.

Think Intermodal – Intermodal facilities are used to transfer freight between transport modes. Such connectors play an integral role in the time and cost of transporting freight. An appropriate intermodal freight facility can resolve future transportation challenges that face the region, help ensure the health of existing businesses, and facilitate future economic growth.

The previous two national transportation bills (ISTEA and TEA21) provide mechanisms to develop and fund transportation solutions that follow non-conventional approaches. Specifically, federal legislation encourages projects that focus on intermodal solutions and use innovative funding mechanisms. Future transportation bills are likely to provide additional opportunities. Specific federal guidelines related to ports include:

- Relieve and prevent congestion.
- Provide sufficient access to ports, airports, intermodal transportation facilities and freight distribution routes.
- Preserve rights-of-way for construction of future transportation projects.
- Identify methods to enhance the efficient movement of freight.
- Develop transportation management and investment strategies that make the most efficient use of existing transportation facilities.
- Use innovative mechanisms, where appropriate, to finance projects.

Intermodal facilities include:

Harbors	Warehouses	Roadways
Docks	Transit sheds	Railways
Cranes	Outside storage	Pipelines
Conveyors	Fleeting space	

One barge can carry the same tonnage as 15 rail cars or 58 trucks.

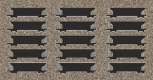
Freight Movements by Water

Riverports operate as intermodal transportation facilities that primarily transfer cargo from rail or truck to barges, or vice versa. As a result, the entire port and all of its facilities, equipment and operations are engaged in the intermodal handling of commodities and freight.

Factors Affecting Port Use – Shippers select inland water transport based on:

- Shipment distance (>450 miles)
- Shipment size (>1,500 tons)
- Shipment direction
- Shipment cost
- Commodity type (non-perishable)
- Low time-sensitivity
- High weight/large volume-to-value ratio

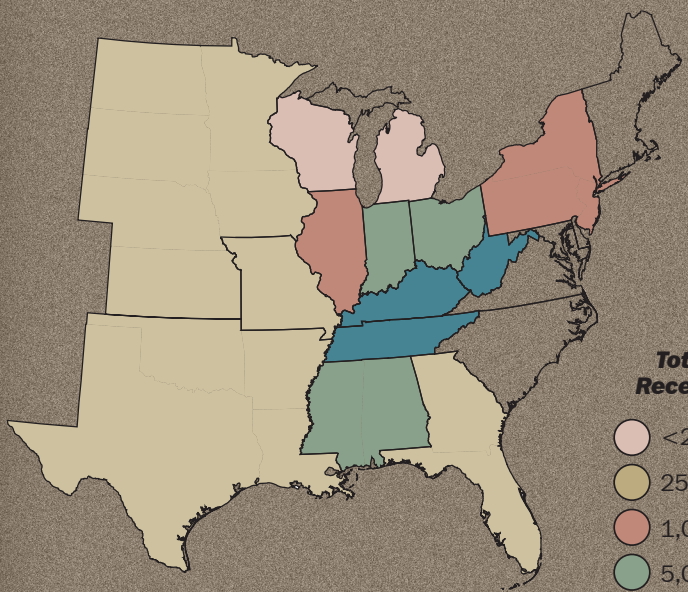
Costs and Capacities by Transport Mode

	Barge	Rail	Large Semi-Trailer Truck
Transport costs per ton mile	1.18	3.07	6.19
Ton capacity	1,500 tons	100 tons	26 tons
Equivalent Units			

Iowa Department of Transportation, December 1994

Commodities that meet these criteria are shipped at a significantly lower cost per ton. The unit costs per ton multiplied by the large shipment volumes result in huge cost savings – even compared to rail. For example, it takes 15 jumbo rail car hoppers or 58 large truck semi-trailers to carry the same amount as a single 1,500 ton barge.

Movements by Location – In 2001, almost 240 Kentucky manufacturing facilities, terminals, and docks shipped and/or received freight tonnage. Waterborne freight movements from Kentucky were shipped to 17 states, with some bound for export by water throughout the world via New Orleans and Mobile. States receiving the most tonnage were Tennessee, Louisiana, Ohio, Alabama, and Indiana. Commodities were received from 15 states, including imports that pass through Gulf Coast terminals. States shipping the most tonnage to Kentucky included West Virginia, Louisiana, Illinois, Indiana, and Pennsylvania. Internal state movements also comprised a large share of Kentucky's waterborne movements.

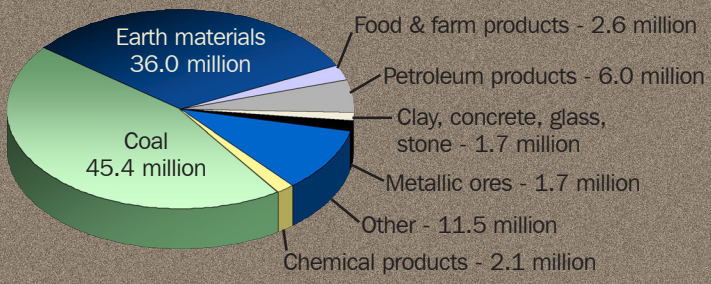


Total Freight (Tons) Received and Exported

- <250,000
- 250,000 - 1,000,000
- 1,000,000 - 5,000,000
- 5,00,000 - 10,000,000
- >10,00,000

Movements by Direction and Commodity – Of the 106.9 million tons of waterborne freight through Kentucky ports in 2002, 66.1 million tons (61.8%) were outbound and 40.8 million tons (38.2%) were inbound. Coal shipments of 45.4 million tons (42.5%) and earth materials of 36.0 million tons (33.6%) dominated commodity shipments. The greater share of outbound coal and earth materials is typically loaded via private terminals.

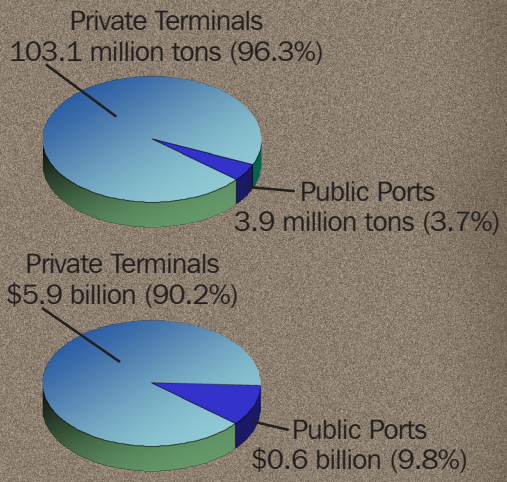
Types of Port Shipments in Kentucky (annual tons)



The economic development mission of public ports requires the flexibility to handle more diverse cargo types.

River Terminal Purpose – The purpose of a river terminal ranges from general to specialized. A special purpose terminal is designed to accommodate a single commodity movement in a highly efficient manner, such as an on-loading grain facility, and often does not have the means to accommodate other types of barge movements (i.e. off-loading steel). Conversely, a general purpose terminal is often equipped to accommodate various commodity types, but does not operate as efficiently as a special purpose terminal.

Water Tonnage and Value by Port Type



Public Ports and Private Terminals

Terminal and port ownership also affect a terminal's operation. Privately owned terminals typically strive to reduce costs, and increase sales and profits. Publicly owned terminals and ports are often developed with the intent of *attracting industry or enabling existing firms to operate more efficiently.*

The specialized nature of the private terminals result in their accommodation of a vast majority of Kentucky's waterborne freight tonnage. Conversely, the broader economic development mission of public ports leads to a more diverse nature of port facilities.

In Kentucky's case, this results in the *accommodation of relatively higher valued freight than at public terminals.* Therefore, while public ports only accommodate 3.7% of *tonnage* handled in Kentucky the tonnage accounts for 9.8% of the total *value* of waterborne freight.

The primary economic impacts of public ports are those associated with the many businesses statewide that use the ports.

Economic Impact of Public Ports

The economic impacts associated with public ports include the direct jobs and expenditures associated with moving cargo through the port as well as the indirect impacts of businesses that ship and receive cargo. A 1999 study found the direct impacts (including multiplier effects) totalled $82.7 million, and the indirect impacts by business users (including multiplier effects) totalled $732.0 million for a total impact of $814.7 million. Further study is needed to determine the current indirect impacts.

Public Port Impacts *(including multiplier effects)*

Impacts	Economic Activity	Earnings	Jobs
Direct Port	$82.7 Million	$18.1 Million	595
Indirect Businesses	$732.0 Million	$183.1 Million	4,568
Total	$814.7 Million	$201.2 Million	5163

The businesses that rely on public riverports to ship/receive cargo generate much greater impacts than the port operations. Without public ports one of three things will happen to these business-users. They will either:

1. Build private terminals, or
2. Shift transport to alternative mode (road, rail), or
3. Close business or move out of state.

Tax Impacts

The economic activity, earnings and job impacts associated with public ports generate state and local tax revenues through sales and excise taxes, income taxes, property taxes, etc. Specifically, public port operations alone (i.e., exclusive of indirect business user impacts) generate an estimated:

- $0.9 million in state and local income tax and
- $0.3 million in sales tax revenues for the state.

The waterway industry also generates tax revenues through property taxes on water transportation businesses and through a "Foreign Barge Tax". Specifically, Kentucky statutes require residents and nonresidents to pay a tax on the value of boats, tugs, barges, and other watercraft owned in and/or operated through Kentucky. The Foreign Barge Tax (KRS 136.181) is assessed on waterway assets located outside Kentucky and is proportioned based on the amount of waterway mileage traveled along Kentucky navigable waterways. Revenues are collected as state property taxes and as local taxes, with the assessed value allocated to counties, cities, and other taxing districts in proportion to the mileage that lies within their boundaries.

According to the Kentucky Revenue Cabinet, taxes levied on common carriers and non-resident water transportation businesses currently approximate $6.0 million, with $2.0 million to the State General Fund, and $4.0 million to local operating funds. Other property taxes related to water transportation, not quantified, include those on real estate and other assets.

Tax Impacts *($ Millions)*

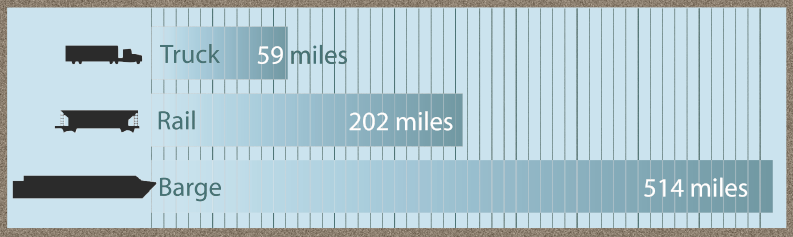
	Taxing Entity		
Tax Type	Local	State	Total
Public Port Operations[1]			
Sales	$0.0	$0.3	$0.3
Income	0.2	0.7	0.9
Subtotal	$0.2	$1.0	$1.2
Other Waterway Operations[2]			
Common Carrier	$1.6	$0.8	$2.4
Foreign Barge	2.4	1.2	3.6
Subtotal	$4.0	$2.0	$6.0

[1]*Excludes private terminal and business user-related impacts*
[2]*Associated with waterborne movements along Kentucky's navigable waterways*

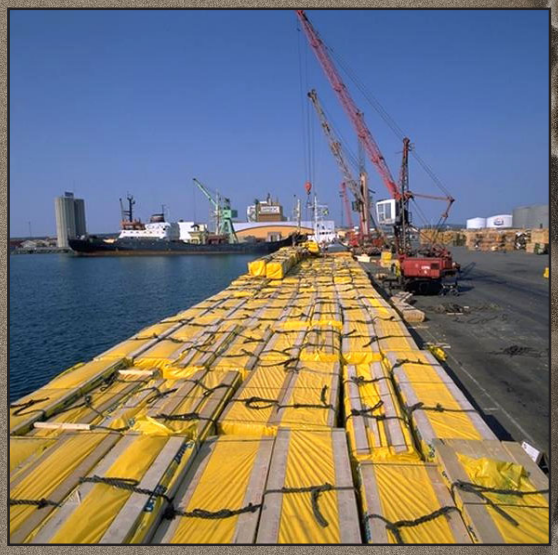
Environmental and Energy Impacts

Water transportation is considered the most environmentally friendly mode of transportation. Statistics show that one gallon of fuel can move one ton of cargo approximately:

Tonnage Transport Distance per Gallon by Mode



The energy efficiency of water transportation results in less air pollution since fewer hydrocarbons and less carbon monoxide and oxides of nitrogen are introduced into the atmosphere. The use of barge transport can also reduce the need for increased highway and rail facilities, thus, avoiding the environmental impacts that could result from their construction.



Public Port Issues

- As key intermodal facilities, public riverports, help recruit businesses that rely on water transportation as a primary or an alternate transportation mode.
- The economic impacts that accrue to Kentucky go far beyond the $86.9 million in expenditures and 600 jobs associated with public riverport services. Rather, the major impact arises from the businesses that ship/receive the cargo, for which little data is available.
- Kentucky's public riverport infrastructure is aging and becoming technologically obsolete. The greatest need identified by the riverports is to repair and replace piers, wharfs, loading/unloading berths, equipment, and storage areas.
- To remain competitive for new industrial development, Kentucky must upgrade and promote their transportation infrastructure and intermodal facilities – especially public riverports.
- To promote safe, reliable access to riverports and other Kentucky intermodal facilities, additional funding needs to be funneled towards Kentucky's transportation system. In particular, improved rail and highway access.
- With these issues in mind, the *Kentucky Association of Riverports* wishes to explore funding assistance opportunities through changes in state legislation.
- State support is also needed to help leverage U.S. Army Corps of Engineers' projects such as upgraded locks and dams that directly impact Kentucky's waterway system.

Kentucky must upgrade and promote public ports and related intermodal facilities to compete for new industrial development.

KENTUCKY
TRANSPORTATION
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